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CLAIMS:

1. A bearing system for use with a motor having a rotor shaft and a rotor rotating within an opening through a stator, comprising a bearing bracket comprising a receptacle surrounding a bearing and supporting the bearing in fixed relation to the bracket, wherein the bracket is adapted to be mounted on the motor such that the opening in the bearing is disposed in the vicinity of an axis of the rotor shaft, and wherein the bracket is sufficiently flexible that the rotor shaft can deflect the bracket so that the bearing moves into alignment with an axis of the rotating shaft but the bracket is sufficiently rigid that the rotor is maintained in spaced relation from the stator during operation of the motor.

2. The bearing system defined in claim 1 in which the bracket is resilient.

3. The bearing system defined in claim 2 in which at least a portion of the bracket is composed of an elastomeric material.

4. The bearing system defined in claim 3 in which the bracket is composed of an elastomeric material.

5. The bearing system defined in claim 1 comprising a rotation lock cooperating between the bearing and the receptacle to restrain the bearing against substantial rotation relative to the bracket.

6. The bearing system defined in claim 5 in which the rotation lock comprises at least one flat on the bearing.

7. The bearing system defined in claim 1 in which the bearing is composed of a polymeric plastic and comprises a flange projecting radially from a hub.

8. The bearing system defined in claim 1 in which the bearing bracket is insert molded about the bearing.

9. The bearing system defined in claim 1 in which the bracket is provided with at least one ribbed post complimentary to a ribbed socket, the post being  
5 adapted to be secured to the socket by interlocking between ribs of the post and ribs formed about a wall of the socket.

10. The bearing system defined in claim 1 in which the bracket is provided with two posts and adapted to interlock with complimentary posts and on a second bracket.

10 11. A motor having a rotor shaft and a rotor rotating within an opening through a stator, having a bearing system comprising

one or more bearings each comprising an opening having at least one bearing surface, for maintaining a radial alignment of the rotor shaft, and

15 one or more bearing brackets each comprising a receptacle surrounding the bearing and supporting the bearing in fixed relation,

wherein the brackets are adapted to be mounted on the motor such that the openings in the bearings are disposed on opposite ends of the stator in the vicinity of an axis of the rotor shaft, and wherein the brackets are sufficiently flexible that the rotor shaft can deflect the brackets so that the bearings move into alignment  
20 with an axis of the rotating shaft but the brackets are sufficiently rigid that the rotor is maintained in spaced relation from the stator during operation of the motor,

12. The motor defined in claim 11 in which the brackets are resilient.

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13. The motor defined in claim 12 in which at least a portion of the brackets is composed of an elastomeric material.

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14. The motor defined in claim 13 in which the brackets are composed of an elastomeric material.

5        15. The motor defined in claim 11 comprising a rotation lock cooperating between the bearing and the receptacle to restrain the bearing against substantial rotation relative to the bracket.

16. The motor defined in claim 15 in which the rotation lock comprises at least one flat on the bearing and a corresponding flat on the receptacle.

10      17. The motor defined in claim 11 in which the bearing is composed of a polymeric plastic and comprises a flange projecting radially from a hub.

18. The motor defined in claim 11 in which each bearing bracket is insert molded about a bearing.

15      19. The motor defined in claim 1 in which the first bracket is provided with at least one ribbed post and the second bracket is provided with at least one ribbed socket complimentary to the post, the post being adapted to be secured in the socket by interlocking between ribs of the post and ribs of the socket.

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20. The motor defined in claim 11 in which each bracket is provided with two posts and adapted to interlock with complimentary posts and on a second bracket.